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tion, and the opinion is expressed that there is no reason to believe that the strength of inheritance is any different in Shirley poppies from that in animals.

Another gain is seen in the recognition of the entire plant as the hereditary unit, instead of the separate flowers, the latter view having been maintained in the earlier paper.

The characters used were the number of stigmatic bands, number of petals and petaloid stamens, color of petals, presence of a margin, presence of a basal spot and its color, and wrinkling of the petals. Each of these characters was divided into a number of categories designated in a manner that makes the personal equation a very large factor, e. g. with reference to the presence of a basal spot, the classes are "none, none to slight, slight, slight to well-defined, well-defined to large, large." The observers found these categories very difficult to separate, and think there is no evidence of allelomorphic characters. They believe that the same is true in many studies made by those who accept Mendel's laws of inheritance. It need scarcely be pointed out that seeds secured from unguarded flowers from a field as heterogeneous as one of Shirley poppies could hardly be expected to show evidences of allelomorphic characters.—George H. Shull.

Drying of seedlings and sporelings.—Rabe finds that germinated seeds and spores resist drying more or less well.30 With advancing germinative stages and exhaustion of reserve food the resistance to drying diminishes. Seedlings will withstand much longer drying in the air than in a sulfuric acid desiccator. The separated hypocotyl of a seedling always dies upon being fully dried out. The cotyledons are more resistant than the plumule, and of the latter the growing point and the axillary buds are more resistant than the leaves. The separated and dried portions of the seedling, if they are yet alive, are as vigorous in reproducing as the separated portions of the fresh seedling. In spite of the defective storage and marked shrinkage, the seedling of the unripe seed will withstand drying nearly as well as the seedling of the ripe seed. Seedlings of xerophytes are more resistant to drying than those of hydrophytes. The presence of the seed coat is a disadvantage to the dried seedling. Rapid admission of water is more advantageous to the dried seedling than slow admission. Seedlings of related species show no relation in their power to withstand drying. free chemical reagents, as alcohol and benzene, act more harmfully on germinated dried seedlings than on ungerminated dried seeds. The germinated dried as well as the ungerminated soaked seeds are more injured by diluted than by concentrated glycerin. The longer the glycerin acts the greater the injury. The germinated spores of mosses are extremely resistant to drying whether in the air or in a sulfuric acid desiccator. Germinated spores of ferns and liverworts withstand but little drying. The power of plants to withstand drying depends mainly upon the peculiar properties of their protoplasm.—WM. CROCKER.

^{3°} RABE, FRANZ, Ueber die Austrocknungsfähigkeit gekeimter Samen und Sporen Flora 95: 253–324. 1905.